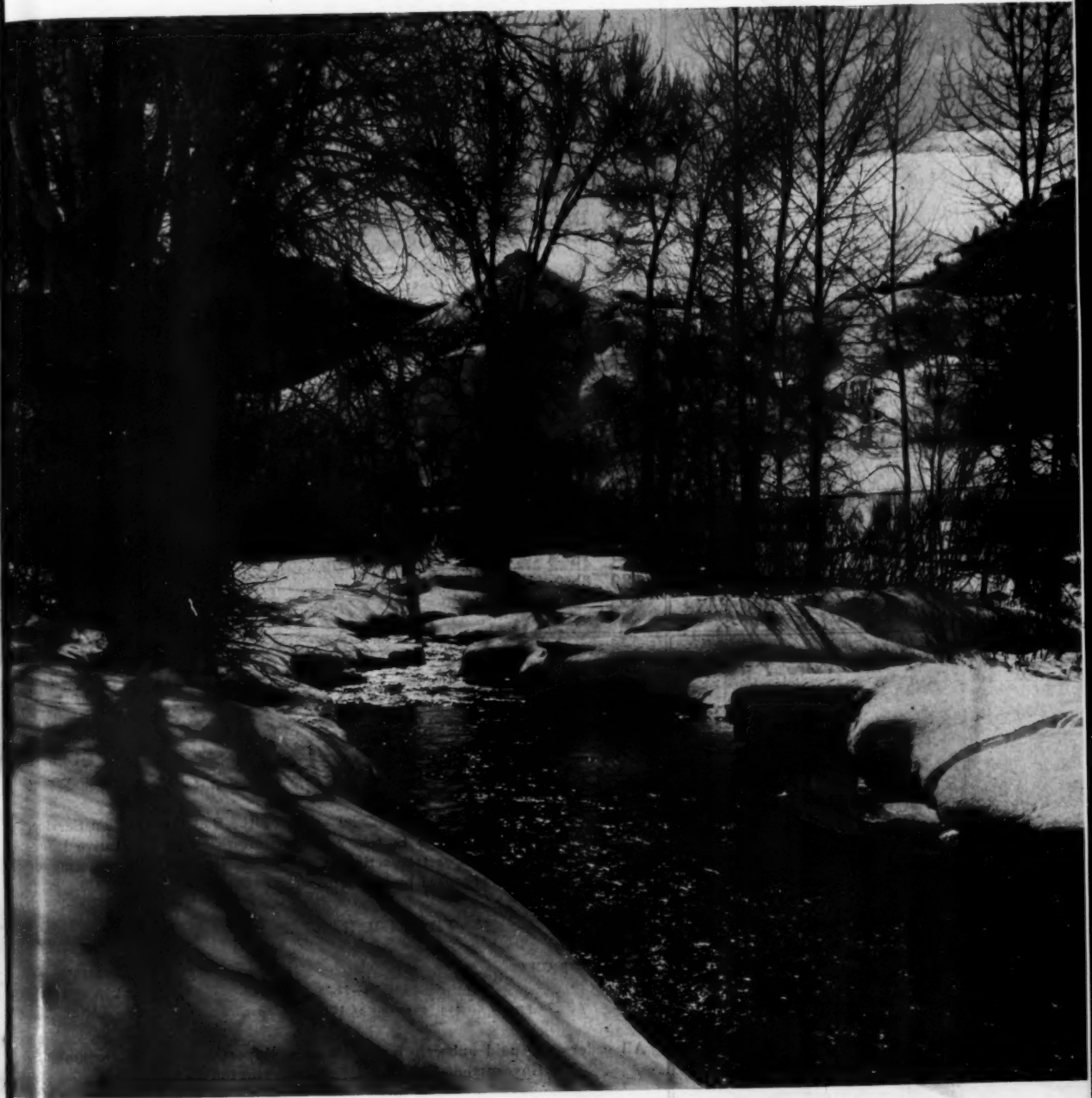


DECEMBER 1961

Soil Conservation



SOIL CONSERVATION SERVICE • U. S. DEPARTMENT OF AGRICULTURE



Growth Through Agricultural Progress

"Districts know what they want to do and why they want to do it. Their decisions may be right or wrong, but the decisions are their own."

—E. C. McARTHUR



COVER PICTURE—Snow surveys made by the SCS in cooperation with other agencies and private interests provide western SCD irrigation farmers and other water users with streamflow and water-storage information that helps them plan their cropping or other operations so as to make best use of summer water supplies or to take flood-prevention steps in high-water years. Wood River in southern Idaho's Sawtooth Mountains.

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Soil Conservation

ORVILLE L. FREEMAN
Secretary of Agriculture

DONALD A. WILLIAMS
Administrator, Soil Conservation Service

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FRANK B. HARPER, Editor

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Soil Conservation Districts Meet Local Community Needs

By Donald A. Williams

SOIL Conservation Service technical aid to the Nation's farmers and ranchers is provided primarily at the request of their own soil and water conservation districts. These locally established and managed units of State governments also take an active part in community small-watershed protection and flood prevention projects, in which the Service is responsible for both technical and financial assistance, and in the Great Plains Conservation Program which provides technical and financial help for whole farm and ranch conservation objectives.

District cooperators—the landowners and operators—have carried the brunt of the soil and water conservation effort in the United States during the nearly 25 years since this new, democratically conceived and operated force in natural resource conservation and use came into being. These self-contained conservation bodies, beholden to no Federal authority but drawing upon any Federal, State, or other facilities that advance their programs, have grown numerically and in prestige during that quarter of a century.

This growth is reflected in the recognition accorded them in the most responsible circles of our own Government and throughout the world. Many other nations have studied the soil conservation district enabling acts of our States, as well as districts' operations, as a guide to developing conservation programs of their own.

Aside from their being mainly responsible for the constantly increasing amounts of conservation we see on the land throughout our 50 States, Puerto Rico, and the Virgin Islands, one of the most significant contributions the soil conservation districts have made to resource conservation and rural area development has been that of building community conservation. Today's unprecedented soil and water conservation movement stems directly from local community action such as that represented in the districts.

Without local initiative and leadership, and full community support and participation, soil, water, and related resource conservation would not be possible in anything like the dimensions in which we are able to measure it today on the farms and watersheds of the Nation. The fundamental job of managing our soil, water, timber, grass, and wildlife resources is the province of the people who own and use those resources. Soil conservation districts, as responsible local agencies under State law, serve as focal points to bring about all-important cooperative conservation action.

The districts' pioneering in community-wide conservation paved the way for us to deal more effectively with today's changed conservation concept and broadened responsibilities resulting from urban expansion, population increase, and technical revolution on the farm. Individual conservation

planning and treatment of scattered farms could not get the bigger conservation jobs done alone. The broad community conservation concept is getting it done.

Although the Soil Conservation Service has been the agency of the Federal Government most closely tied in with the work of the districts, they obtain formal cooperation from various other agencies, in cost-sharing, credit, and other help in advancing their programs. They likewise have obtained increasing financial and administrative help from the States, which have appropriated nearly \$5 million during the current biennium for specific assistance to districts.

The districts similarly have enjoyed the cooperation of industry and other private interests. Business leaders have seen in their goals not only a promise for those who derive their living from agriculture, but also a major step forward for a more stable economy for both farm and nonfarm communities. Public support for the work and objectives of the districts has been advanced through the interest of press and radio, educators, the clergy, and many farm and nonfarm organizations.

The conservation planning and treatment done in the districts will continue to be basic, whatever the agricultural resource conservation undertakings with which we may be dealing. The soil conservation district truly is the Nation's agricultural resource conservation benchmark.



Successful conservation farming gives Lynn Bookhout cause enough to smile.

FROM 24 dairy cows to more than twice that number in 10 years by converting an unsuccessful cropland farm to grass farming is the soil conservation district success story of Lynn Bookhout in central New York.

Bookhout bought the 365-acre farm about 10 years ago, in the rolling to steep hills of the Madison County Soil Conservation District. The former owner grew green snap beans, wheat, and short-term hay mostly to plow under ahead of the next bean crop.

Bean rows ran straight over the hills. Erosion and water loss were common on the fairly heavy, though generally well-drained, silt loam. A number of gullies had cut into the upper subsoil, in spite of having been plowed and cultivated so that several times each year they "didn't show." Pastures characteristically were grown over with thornapple and wild apples. Hedges of elm, black and choke cherries and other species masked old field boundaries. They often also masked stone walls as the most convenient dump for stones that had been gathered off the crop fields over many years.

When Bookhout, a County Extension Agent before and during World War II, brought his 30 to 40 head of cows to the farm, he

DISTRICT PROGRAMS

Work for the Farmer

By Royce B. Brower

was faced with the problem of getting enough to feed them from the brush lots and gullied beanfields. The first year, he had to grow a large amount of corn, because 70 of the 130 acres of cropland already had been plowed, including some fields that had been in row crops the year before. For hay, Bookhout seeded what he calls a "shotgun mix," or anything to make feed. He estimates he produced enough feed for only about 24 head.

Before he even moved in, he had asked the Madison district for help. Soil Conservation Service technicians helped him work out a conservation plan for better use of his soil and management of water.

One of the first steps he took according to plan was to seed down one field to a pasture mixture based on Ladino clover. Another field, steep and low in fertility, was seeded to birdsfoot trefoil.

The second year, some of the cropland was laid out for contour strips, with spaces left for later establishment of diversions. A basic rotation of corn, oats, and 3 years of hay was set up.

Meanwhile, old pastures were cleared and re-seeded to Ladino clover or birdsfoot trefoil mixtures, limed, and fertilized. As a result, production gradually improved to the point that it no longer was necessary for Bookhout to scour the countryside for standing hay



Bookhout reseeding a field with a grass-legume mixture, using oats as the combination crop.

Note:—The author is work unit conservationist, Soil Conservation Service, Morrisville, N.Y.

to buy. After a few years, Lynn decided to forget corn, at his 1,400- to 1,750-foot elevation, and go entirely into grass. He uses oats, which go into the silo, as a companion crop after sod is broken.

His 50 acres of cleared pasture fields are cut for hay or silage, or the "crop" fields can be pastured as well as mowed. Each field remains in hay for 4 years. His hay mixtures consist of Viking birds-foot trefoil-Climax timothy, or Narragansett alfalfa-birds-foot trefoil-timothy, depending upon drainage or other conditions.

Planting on sloping fields still follows, generally, the old strip-cropping pattern.

The Bookhouts have built one farm pond, stocked with rainbow trout, and plan another for reserve stockwater supply. They also have, jointly with a neighbor, a marsh pond; have installed and are planning more diversions and tile drainage. They have completed improvement cutting on about 95 acres of the mixed hardwood, added cutback borders for wildlife, and planted conifers.

Lynn now has 96 head of cattle, of which 54 are milking stock. He

meets all his pasture, hay, and silage needs from his own farm, with one silo for grass and another for storing 12 to 30 acres of oats a year. His DuPuits alfalfa in 1960 yielded better than 6 tons an acre, with some of it pastured off once. His milk production totaled 597,000 pounds in 1960.

Possibly the most important benefit of all realized by the Bookhouts from their soil conservation district operations is the fact that they have been able to send two sons to the College of Agriculture at Cornell University, the older of whom graduated in 1961.

What a Typical SCD Leader Does—Gratis

By Leon J. McDonald

THE voluntary services of President Lavern Fishel of the Oklahoma Association of Soil Conservation Districts are typical of the unsalaried work of district leaders over the Nation in furthering a sounder rural and total economy today and for the future.

It is "Judge" Fishel, incidentally. He is a district judge for Coal and Atoka Counties. He is not a district supervisor, but he has a basic soil and water conservation plan on his own ranch in the Coal County Soil and Water Conservation District.

Here is part of a report he made to the State association's 1961 annual meeting on his activities in behalf of fellow district farmers and ranchers the year before:

"I have traveled 10,266 miles in my own personal car on official business; attended 60 public meetings, some at night, some in the daytime, some of them longer than

a day; made 210 long distance telephone calls; wrote and mailed 4,155 letters and other communications. This does not include the many hours spent in the office or on the telephone consulting various individuals concerning our mutual problems affecting soil and water conservation. Nor does it

include the trips made by public conveyance, or with others with whom I was invited to ride."

And Fishel's philosophy indicates why he has been so busy and is now serving his fifth term as State association president.

"People are the most important resource available to district governing bodies to get the job done. When people are informed and motivated, the conservation job will be done. We should encourage people to participate in our soil and water conservation program at the district level. . . .

"There is no more essential unit of our free government than the soil conservation district and the supervisors . . . 'Supervisor' has become an honored title. It is honorable, dignified, and exemplifies more than any title I know the good qualities of public service."



Judge Laverne Fishel speaks his piece.

Note:—The author is assistant State conservationist, Soil Conservation Service, Stillwater, Okla.

Yule Trees

For a Merry Christmas

By John Hultgren

ROY BEERY of Washington State near Seattle is one among many soil conservation district farmers across the country who are making sure that Santa Claus will continue to find the traditional yule trees under which to unload his pack on his future Christmas-eve visits to the homes of America.

Beery, a King County Soil Conservation District cooperator, became interested in Christmas tree farming when he served on the County Agricultural Stabilization and Conservation Committee. Soil Conservation Service soil surveys showed that the best land use for his farm, between Kent and Renton, is permanent cover of trees or pasture. They indicated his land is especially good for growing

Douglas fir timber.

Paradoxically, without intensive management, the trees grow too fast for good quality Christmas trees.

Another problem on his Alderwood gravelly, sandy-loam soils is that conifer seedlings normally have a hard time getting estab-

January 1 to 15, 1958—Site preparation (plowing, disking, and rowing)

8,500 trees

January 15 to 30, 1958—Hand planting

Summers 1958, 1959—Cultivation

Total cost of establishment

Cost per acre

\$140

111

147

200

\$598

\$120

lished, because of intense competition from hardwood, brush fern, and grass.

Beery was advised by the SCS

woodland conservationist that, because of markets, disease, and growth characteristics, it would be advisable to plant several species of conifers to assure the best and most dependable conservation land use in his new venture. He started his Christmas tree farm in January 1958. The table shows what it cost him to establish the original 5-acre planting.

Species planted, in separate blocks, were 2-year-old Douglas fir, Scotch pine, blue spruce, and 3-year-old Norway spruce and Austrian pine. The seedlings were acquired from the Clark-McNary nursery, then located at Pullman.

Better than 80 percent of the trees survived, despite the exceptionally dry summer of 1958, and now range from 4 to 7 feet in height. Now well established, they need no further cultivation. Invading ferns and grass are con-



One of these fast-growing Scotch pines may be your Christmas tree when Beery markets them.



Beery measures 1 year's Norway spruce growth in 1958 Christmas tree plantation. Austrian pine on left.

Note:—The author is woodland conservationist, Soil Conservation Service, Renton, Wash.

trolled with a rotary mower. One area of failure, where 2-year-old blue spruce had been planted, was replanted in December 1958 to 2-year-old Noble fir and Douglas fir.

To control the trees' fast growth,

of 12 to 24 inches in a season, and keep them from becoming too bushy for salable Christmas trees, Beery shears and prunes the young Douglas fir and pine trees. The rapid-growing Norway spruce

develop naturally into an acceptably bushy network of branches.

Starting in 1962, Beery plans to sell and replant 500 trees a year, with a ready local market in populous King County.

Womenfolk Get In On Soil Conservation Districts Act

By Lamar R. Mason

ARLAND Thompson's womenfolk have taken active part in his and brother Darwin's profitable conservation ranching operations in the Box Elder Soil Conservation District in northwestern Utah. The ladies in this family undertaking are Arland's wife, Glenna, and daughters Andrea and Arlene.

Besides the important jobs of cooking and housework, Mrs. Thompson keeps the books, and she and the girls often lend a hand at driving tractors, helping with the haying, and doing a thousand and one other chores, including planting and caring for the vegetable and flower gardens. In addition, Arland and Darwin depend upon Glenna and the girls to drive to Burley, Idaho, or various towns in Utah for parts and supplies.

The entire family decides on all important business matters. What they consider one of the most important of such decisions was made the evening they all sat down with a Soil Conservation Service technician around the dining room table in October 1952 and settled on the practices they would include in their conservation ranch plan. Ever since, the womenfolk have

encouraged the men to speed up their conservation practices.

Arland Thompson, who has been a district supervisor since January 1956, and is the Box Elder County director of the Utah Cattlemen's Association, had reached this conclusion after they worked out their plan:

"If I don't get range improvement I won't be able to stay in business."

Studies of beef yields on his rangelands at Yost showed a yield of only 1¾ pounds of beef to the acre, because most of his range was in poor condition. Today, his seeded rangelands are producing



Arlene, Mrs., and Andrea Thompson in field of tall wheatgrass that yielded well and produced excellent gains for Hereford cattle in background in dry 1960.

Note:—The author is range conservationist, Soil Conservation Service, Murray, Utah.



Arland Thompson seeding crested wheatgrass on cleared sagebrush land.

from 12 to 20 pounds of beef an acre a year, depending upon precipitation and other climatic factors.

Starting with the purchase of the 3,100-acre original ranch in 1952, the Thompson family bought 1,260 acres from other individuals, and 640 acres of Federal range-lands. Brother Darwin owns 1,055 acres. Their operations total 6,055 acres. In addition, Bureau of Land Management and U. S. Forest Service permits are an important part of their operation.

A 1952 inventory showed that only 141 acres were in "fair" condition, with the remaining acreage in "poor" condition. They since have seeded 1,230 acres, or



The Thompsons frequently review their ranch conservation plan to keep their work up to date.

74 percent of their goal, getting good grass stands despite dry years and heavy rabbit damage.

Arland reminisced while standing in a seeding of tall wheatgrass: "We have developed more feed on these 50 acres than the full section had on it before."

The Thompson brothers base the numbers of livestock grazed on the time that they graze each range area and on the amount of forage it produces each year. This usually is slightly more or less than 2 acres an animal-unit-month on tall wheatgrass, and from 2.5 to 5 acres on crested wheatgrass.

In addition to range seeding and proper grazing use, conservation measures on the Thompsons' irrigated lands include three storage ponds and 45,000 feet of improved ditches for more efficient application of their usually limited irrigation water supply.

Harvesting their own crested wheatgrass seed has enabled them to seed a greater acreage in a much shorter time than they could have otherwise.

Faced with declining forage production, the Thompsons, along with other public land permittees in the Yost area, launched an improvement program in cooperation with the Forest Service and the BLM.

Before then, this area was stocked at the rate of 30 acres an animal-unit-month, but, through seeding, was improved to 5 acres an animal-unit-month in 1955, 1956, and 1957, and in 1958 and 1959 to 4 acres. Beef production has increased from around 2 pounds an acre to between 15 to 20 pounds an acre on these crested wheatgrass areas.

The crested wheatgrass pasture—especially the 2,500-acre BLM seeding—has been, in the Thompsons' words, "a life saver," when they have faced adverse conditions of drought, rabbits, permit cuts, and low cattle prices. They now have enough private and public land allotment seedings to weather extreme conditions.

From a range so poor that 30 acres were required to support an animal unit for a month, the Thompsons have improved more than 1,000 acres of their range-lands to productions ranging from 1 to 4 acres to support an animal unit for a month; and their native ranges are also improving as a result of leaving half of each season's growth of the key forage plants each year to make vigorous, healthy, fat forage plants.

In their nationwide Golden Jubilee project devoted to conservation service for 21½ years, the Camp Fire Girls made 1,000 plantings for erosion-control work and installed a number of deflector dams and check dams. They also planted millions of acres of trees, surveyed more than 1½ million acres of land for recreational uses, built shelters and birdhouses, and provided food for fish and wildlife.

The 1962 meeting of the American Society of Range Management will be held in Corpus Christi, Tex., January 23 to 26. Topics which will be discussed include: Range-lands of the Southwest and Mexico, range management advancement through cooperation, range production and economics, research methods and techniques, range wildlife, international cooperation in grass-land management, history of the range, range improvement practices, and range condition and trend. Also on the program are a trip to the King Ranch, and other optional tours.

Colorado State University-USDA tests have shown that leaching silts from slightly saline soils may reduce evaporation losses 25 percent and save 12 percent in the amount of water needed to grow crops.

Conservation Saves Tax \$\$

On Institution Farms

By Leon J. McDonald and John O. Helein

RESIDENTS of Oklahoma's State Institutions are being fed better at less cost to the taxpayers because of soil and water conservation programs being used on their farm and ranch lands.

State Farm Coordinator J. D. Ferris has insisted that institution farm supervisors take full advantage of help available through their local soil conservation districts. The Soil Conservation Service work unit conservationist assigned to the local soil conservation district works with each institution's farm supervisor to develop a basic conservation plan that is "tailor-made" for the operating unit, and the needed conservation practices are applied as rapidly as possible.

The conservation program in effect on lands operated by the

Eastern Oklahoma Hospital at Vinita is typical. Superintendent P. L. Hays of the hospital says, "The food produced on the farm has saved the institution about \$1 a day per patient."

Its conservation plan was started in 1954, and today the 2,116-acre farm is a model of soil conservation. Almost 10 miles of terraces have been built. More than 250 acres of pasture have been planted. An excellent bermudagrass-clover pasture has been established on 150 acres. A hay and pasture rotation is being carried out on another 200 acres. Three ponds have been built to provide water for livestock and for recreation. A conservation cropping system is being applied on 600 acres of cultivated land.

When the program was started



Manager John A. Hightower of State School for Boys in Garvin Co., Okla. (right) and SCS WUC Sam Lowe plan future conservation work.

about 6 years ago, the 90-cow dairy herd averaged only 16.6 pounds of milk a day. For the 5 months of April through August 1959, the sharply increased herd of 132 cows averaged 49 pounds of milk a day.

Records of conservation plans involving 15,842 acres at nine Oklahoma institutions show that 99 miles of terraces have been built and 31 waterways built and grassed. More than 2,500 acres of formerly cultivated land have been revegetated and are producing abundant forage for dairy and meat animals. Eight irrigation systems involving 694 acres have been developed. A rotation system of hay and pasture is being applied on 1,342 acres. The conservation cropping system is maintaining and improving the productivity of 5,046 acres. Conservation drainage-improvement systems

Note:—The authors are, respectively, assistant State conservationist, Stillwater, Okla., and work unit conservationist, Barre, Mass., both of the Soil Conservation Service.



Vegetables in contour 2-year strip-crop rotation with hay on Templeton Colony school farm.

have been applied on 510 acres.

The W. E. Fernald State School for retarded boys at Templeton, Mass., is another working example of how taxpayers all over the country are saving money as a result of soil and water conservation systems being used on institutional farms.

When conservation-minded Henry Weidlich became head farmer of the popularly known 2,500-acre Templeton Colony 9 years ago, he found much of the farming land to be stony, steep, and wet, with only 100 acres of tilled land cleared from woodland. Erosion was severe in several fields, and drainage was needed on others. The colony provided forage for only 36 cows, and pasture had to be rented for young stock. There were 3 silos and 5 old barns. Hay production averaged about 1½ tons an acre. Vegetable production was below average. No conservation forestry work was done except harvest cutting for lumber. The farm was capable of providing a home for only 260 boys.

Working through the Northwestern Worcester County Soil Conservation District, Weidlich worked out a conservation farm plan with Soil Conservation Serv-

ice technicians, based on his soils map and farm needs. The eroded fields were planted to fertilized legumes and grasses. Steep land was contour stripped in a conservation cropping system of corn and hay. Sod waterways were installed. Stones and stone walls were removed, and pasture rotation, now totaling 134 acres, and deferred grazing soon were possible. Additional tile drainage and ditches were installed in wet fields.

The school farm's dairy herd has been increased to 150 milkers and 70 young stock; and total live-stock, including horses, oxen, and bulls, number approximately 250 head. Four silos and new cow barns have been built, to hold the 900 tons of silage produced for year-round feeding, out of total corn and grass silage production of 2,000 tons and 1,000 tons of hay. These crops are grown on 40 acres of cornland and 335 acres of legume-grass hayland, in a strip-crop rotation system.

Sixteen acres of contour strip-cropped vegetable fields, in a rotation of 2 years of vegetables and 2 years of hay, now meet the needs of 375 boys, who receive conservation and other agricultural training, and 100 employees at the



Conservation farm plan progress being checked by (left to right) SCS WUC John A. Helein, Head Farmer Henry Weidlich, and Farm Coordinator James Mistark of W. E. Fernald School.

school, and grow winter storage-type vegetables for other State institutions. Approximately 1,000 timbered acres have been thinned or pruned and harvest-cut, under direction of the district forester, for use of the farm and other State institutions, on an average of 100,000 board feet a year.

Savings to the taxpayers from the improved production that has resulted from the school farm's conservation system is estimated at \$20,000 to \$30,000 a year. Its 150 milking cows were second in production in the United States in 1960, being topped only by a similar herd in California.

"There is no limit to the future of soil conservation," Weidlich says. "Our recently revised conservation farm plan has been designed for the next 10 years. Modern farming requires long-range planning, especially with a large herd."

Weidlich was chosen Award Winning Conservation Farmer for 1960 by the Northwestern Worcester district.



No wind erosion here! Western State Hospital's farm supervisor, John Nemeck, checks on Duroc brood sows grazing supplemental pasture.

Scientific talent is especially needed in agriculture.



Dedicated

Conservationist

DON Hill is a man long dedicated to the cause of conservation.

Hill helped organize the Douglas Creek Soil Conservation District in Colorado in 1945, and has served as a supervisor ever since and as chairman to early in 1961. In summer months he travels 90 miles over a treacherous mountain road to board meetings, which he seldom misses. He also is a member of the Uintah Basin Soil Conservation District of Utah, into which his ranch extends.

Having seen personally the disastrous results of range exploitation, Hill is proving through his own sound conservation plan and program that the scars can be healed and the range brought back to the productivity he remembers.

The Hill ranch stretches from the desert country at Rangely, Colo., where he was born in 1892, to the high summer ranges atop Baxter Pass, 90 miles to the south. His patented land lies in three counties in the two States.

The ranch covers an area rich in unwritten history. The ghost towns of Dragon, Watson, and Rainbow Junction mark the course of the old Uintah Railroad narrow-gage mining line. Chipeta, wife of the noted Ute Indian chief, Ouray, lived and died on the Hill ranch.

Hill's father and grandfather came from New Hampshire and homesteaded in 1882. They ran Texas longhorns and mixed short-horns until 1915, and the senior Hill operated an Indian trading post to supplement the family income. None of Don Hill's holdings came to him the easy way.

First, starting in 1904, was a drawn-out struggle, in the courts and out, to hold onto the homestead

against attempts of a sheep company to refile and take over the Hill land. The Hills proved they didn't scare. The courts finally decided that the Hills' claim was valid.

Then came the winter of the big blizzard in 1915-16. Cattle were herded to the railroad to be fed hay in a country where cattle normally graze the range year long; but the trains were snowed in and couldn't

sive, and they never have returned.

Finally, in the early 1920's, the bottom dropped out of the cattle market, and ranchers sold livestock at 6 cents on the dollar. The Hills refused to sell; confiscation proceedings fell flat, because Hill cattle could not be found; and when the market went up in 1926, Don Hill met his obligations in full.

By World War II, the homestead on Bitter Creek had become a ranch of 150,000 acres supporting 1,500 cows.

Hill has served for 7 years on the executive committee of the National Cattlemen's Association, is a director of the Utah Cattlemen's Association, and an active member of the Colorado Cattlemen's Association.

His son, Harry, who also is an avid conservationist and is following in his father's footsteps, represents the fourth generation of Hills on the ranch.

—ELLIS F. SEDGLEY



Don Hill.

keep the feed coming; and cattle died by the thousands. While many cattlemen were going broke that winter, Hill gambled on leaving his cattle on the open range. Although his losses were high, most of his herd found feed on high, wind-swept ridges and survived.

Next, in 1919, came a 3-year war against timber wolves. One pair killed 60 of Hill's best cows. The extermination of one wolf alone involved an 8-day trek over 200 miles of the roughest country. But his victory over the wolves was deci-

Agriculture offers young men a greater variety of jobs than almost any other industry. In business, education, engineering, science, or technology, talented youths can find outstanding opportunities in agriculture. At least 40 percent of all jobs available in the United States today are related to some phase of agriculture.

The average farmer can do as much soil building in a few years as his grandfather could do in a lifetime, because he has better tools and more advanced technology with which to do the job.



William E. Richards.

THIS is an appropriate time for taking stock of our Nation's soil and water conservation districts on the eve of the 25th anniversary year of one of the most far-reaching movements in the history of American agriculture.

Farmers and ranchers of the 50 States, Puerto Rico, and the Virgin Islands share the pride of purpose and accomplishment that have borne witness to the soundness and practicability of the districts concept since the first of these local units of State government was voted into being a quarter of a century ago. That was the Brown Creek Soil Conservation District in Anson and Union Counties, N.C., organized under a State enabling act on August 4, 1937.

Between that historic date and July 1, 1961, the number of conservation districts had grown from only 1 to exactly 2,900! These democratically conceived and locally organized and managed districts today include within their boundaries 92½ percent of all the country's farmlands, and 96 percent of its farms and ranches. Millions more acres not being used for farming or ranching also are included in the districts.

Twenty-three States now are completely covered by districts, as are Puerto Rico and the Virgin

Islands; and all the rest of the States but one are from two-thirds to 90-plus percent covered. There are only about 200 agricultural counties, out of a total of approximately 3,000, where landowners have not yet organized districts under their State laws.

These soil and water conservation districts are not just "paper" organizations: At the beginning of the present fiscal year, nearly 1.9 million landowners and operators were cooperating with their districts in planning and applying soil, water, and plant conservation on their lands. Already, 1½ million of these cooperators had basic conservation plans in effect, and the others were in the process of developing and applying such plans. During the last year, about 116,000 farmers and ranchers

joined the ranks of district cooperators, and 102,000 were fortunate enough to get help in working out their basic farm conservation plans. Thus it is that the inevitable backlog of as yet unreached landowners and operators is being whittled down year by year.

The total number of farmers and ranchers operating within soil and water conservation district boundaries is 4⅓ million. They include the new district cooperators of the future, as individual districts' technical and other facilities for helping them to farm the scientific conservation way become available. In the meantime, those who are not yet cooperators must bide their time while awaiting their turn to avail themselves of conservation aid from their local districts.



Farmers and ranchers vote for their conservation districts.

Conservation Districts

By William Richards

n Districts in Action

By William Richards

This phenomenon of soil conservation districts in American agriculture has not come about through happenstance. It has resulted from the fast-awakening desire of those who manage the Nation's privately owned agricultural and water resources to strengthen their position and insure these basic assets against the hazards of the present and the future. It has come about through hard work and serious devotion to that purpose by all of those farmers and ranchers who are district cooperators, and by those who serve voluntarily and without pay as the managers of district affairs. And it has come about through a growing understanding on the part of responsible public officials—Federal, State, and local—and the consuming public generally, of the vital neces-

sity of safeguarding the source of our food and fiber for the future security and well-being of our fast-growing population.

Unfortunately, the last-named contributing factor to district progress is still our weakest link. If there is a single, overriding conservation challenge as we move into 1962, it lies in the area of public understanding. There still are too many people who do not fully understand either the present or prospective problems of managing our limited supplies of land, water, timber, grass, and wildlife resources. Understandably, they are likely to be more preoccupied with such headline subjects of the day as taxes and the cost of living, atomic bomb testing, and West Berlin—and, the quest for a new "farm program"



America's soil conservation district farmers are proud of what they have to show (North Dakota).

to dissipate present temporary surpluses of a few farm commodities.

The public needs to know, however, that our per-acre production of essential crops must double by the year 2000 in order to meet the needs of a United States population estimated by the Bureau of the Census to total as high as nearly 420 million by the turn of the century. Also, that our water requirements will double by 1980, or less than two decades hence.

How well are we preparing for these future drains upon our soil and water resources? We are learning more through agricultural research. We have, in the soil conservation districts, the means of applying local initiative and responsibility to the job ahead, on individual farms and ranches, including those in the Great Plains Conservation Program, and through community-wide watershed-protection and flood-prevention projects. We have able Government agencies, including the Soil Conservation Service, Forest Service, Agricultural Stabilization and Conservation Service, Bureau of Land Management, State Agricultural Experiment



Supervisors about their district's business.

Note:—The author is president of the National Association of Soil Conservation Districts, Holdrege, Nebr.



District officers keep tab on conservation progress on the land (Culpeper SCD, Virginia).

Stations and Colleges, and other fine State and Federal resource agencies on the job. What we need

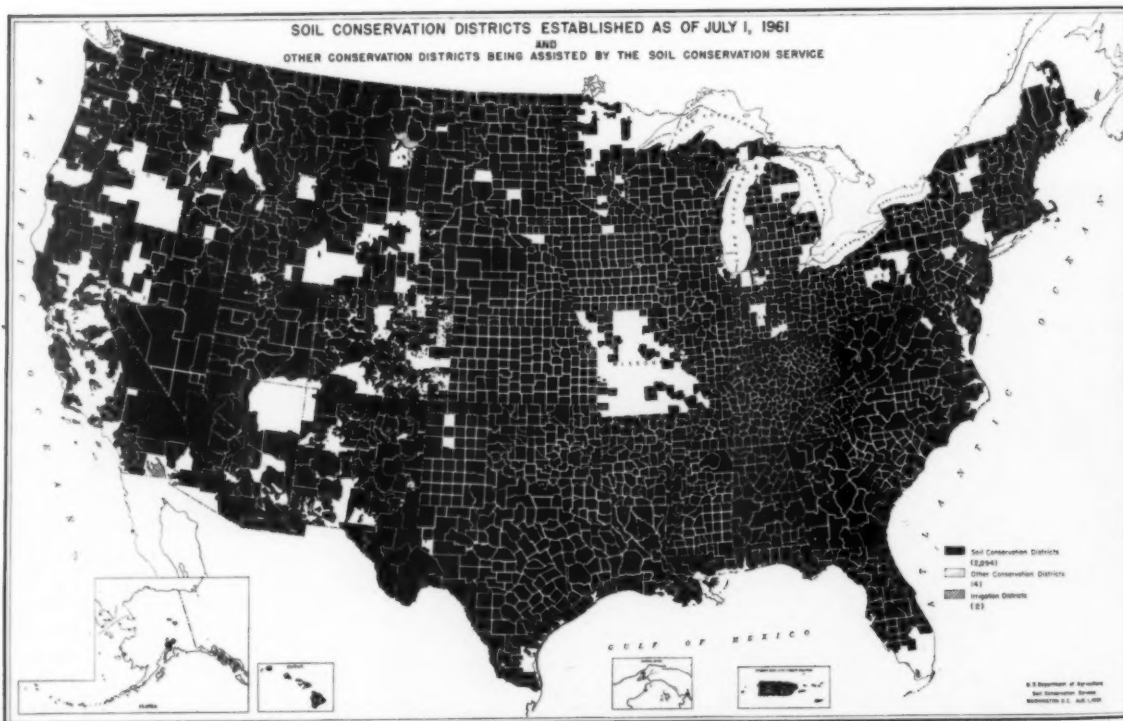
most, then, is sustained public interest in and backing for the work of all these agricultural resource betterment forces.

Two trends, or developments, in more recent years have intensified the responsibilities and opportunities of our approximately 14,500 soil conservation district supervisors, directors, or commissioners to lead the way for agricultural resource conservation for public and national benefit. One is the burgeoning metropolitan movement that has seen land going out of agricultural use at the net rate of a million acres a year as those areas continue to bulge at the seams. The other is the increased attention being given to rural development of a kind that means better farming, community business, recreation, and other benefits for rural America, especially in areas where income and living standards are being held back by

underemployment of the people.

Metropolitan or rural, virtually all of the areas involved fall within soil conservation districts. We who have been elected by our fellow landowners and operators to look after district business—local, State, and national—have an overriding obligation and an impartial interest in doing everything within our province to meet these newer challenges in stride.

Without in any way attempting to take credit for carrying the world on our shoulders, I think I can say truthfully that we in the soil conservation districts—from the senior supervisor to the newest cooperator—are making as substantial a contribution to a better and more secure America as ever has been made since our forebears touched the uneroded shores of this land of unbounded soil, water, forest, grassland, and wildlife resources.



Farmer-organized and managed soil and water conservation districts—2,900 of them—include 96 percent of the Nation's farms and ranches and 92½ percent of its farmlands.

SCD Plan Means College

For Michigan Youngsters

By Wendell Somers

FARMING their 320-acre farm the soil conservation district way in Eaton County is a family affair for the Albert Nelsons of Michigan.

Their 37 Holsteins earned a place on Michigan's 400 Honor Roll, averaging 447 pounds of butterfat and 12,169 pounds of milk to the cow for 5 years. But here is the most important payoff to the Nelsons from their profitable conservation farming:

Son Russell will be able to attend the 1962 Michigan-State University Short Course on Dairying and Farm Management after graduating from Eaton Rapids High School last spring, so he will be better prepared to help handle their planned expanded 60-cow or larger herd.

Daughter Dorothy, chosen 1961 Dairy Princess for Eaton County and a participant in the competition for Dairy Princess of Michigan, was able, after also graduating from Eaton Rapids High this year, to attend Lansing Business University.

Things could have been different for these youngsters if it had not been for Albert Nelson's taking up the soil conservation district way of farming; because, as Mrs. Nelson said, "When we moved onto the original 200 acres 19 years ago, in 1942, we were 100 percent in debt."

The Nelsons' farm is mostly level, heavy, and wet, with 216 acres of cropland. Eighty acres were in muck, which is gradually

being reclaimed. The farm was badly run down, needed lime, and was low in fertility. Soil structure was poor, further aggravating drainage and resulting in low yields. It was nearly impossible to raise alfalfa.

"We originally planned cash cropping, but low production discouraged us," Albert explained. "In about 3 years, we changed our

basic conservation plan for his farm in 1950.

"How much easier farming would have been for us if we could have had a farm plan when we started farming," he said. "It would have provided us that valuable inventory of what we had to work with. The farm plan based on capabilities of our land was the turning point in our farm operation. It gave us a schedule of operations to follow in applying needed soil and water conservation practices, developed with the help of the Soil Conservation Service through our soil conservation district.

"Since becoming a district co-operator, our alfalfa production has reached 4½ tons, or three times the original yields. New varieties, of course, have also contributed to yield increases. Corn and oat production has doubled since 1950, now standing at 90 to 95 bushels of shelled corn and 100-plus bushels of oats to the acre. The production of the entire farm has steadily increased over the past 11 years, and is continuing to increase. The quality of feed has improved, contributing to increased production from our livestock. By comparison, some of our first attempts were feeble."

Improved drainage on the Nelsons' farmland was the conservation measure which made it possible to apply other conservation practices. They followed through with a good rotation, minimum tillage, and cover and green manure crops. They leave crop residues on the land over winter and make liberal applications of



The Nelsons—(left to right) Mr. and Mrs. Russell, and Dorothy.

minds completely. If I had known more about soils as far as capability, fertility, and tilth are concerned when I bought the farm, I never would have started on a cash-crop venture."

In 1946, he helped organize the Thornapple-Grand Soil Conservation District in Brookfield Township. An early cooperator with the district, he developed a complete

Note:—The author is work unit conservationist, Soil Conservation Service, Charlotte, Mich.

their dairy barnyard manure. They also have increased their use of commercial fertilizer.

"We have tried to apply ideas that would fit our farm situation, not necessarily what someone else did," Nelson senior explained. "We look at needed conservation practices as investments rather

than costs. Back in 1951, this was a bitter pill to swallow. We knew alfalfa was needed in the rotation. Other costs had been considerable, and alfalfa seed was not cheap. It was rather difficult to see it as an investment, especially when Mrs. Nelson was saying that her 200 hens were making more money

than the 12 dairy cows."

Today, the Nelson family—Albert, Mrs., and the kids—face the future with confidence. They know that sound conservation practices applied on the land in accordance with their soil conservation district plan will continue to help them live more abundantly.

Owner-Renters and Landlords

All Profit From SCD Program

By Charles A. Holden, Jr.

BROTHERS Jim and Bob Varner have a reputation for hard work and lots of it among their neighbors around Oskaloosa, Kans. They began farming after their father died while they were still in grade school.

In 1948, they became cooperators of the Jefferson County Soil Conservation District. Over the years, they have built a production farm,

with help of a complete conservation program that has brought about the improvement of 300 acres of rented ground as well as 400 acres of their own.

The Varners' successful accomplishments illustrate how landowner-operator, renter, and landlord alike benefit from farming or ranching systems worked out through their soil conservation

districts with technical help from the Soil Conservation Service.

They grow alfalfa and clovers extensively and use good crop residue practices on both the rented ground and on their home place. They persuaded their landlords to build waterways and terraces, and have put them on their own Class III and IV croplands. Proof of the value of their system is increased per-acre grass and other yields, reduced erosion, and better profits. One landowner, skeptical at first, has rented to them for more than 10 years.

In 1957, Bob and Jim started in on a 240-acre farm they had bought, most of it Class III and IV land. Originally, the soil was fertile, but erosion and continuous cropping had reduced the fertility and productivity to a point where no one tried to farm it for years. The farm was foul with weeds.

A previous owner had built and seeded one waterway. Within 2 years, additional waterways were established and all the cropland terraced. Gullies were filled and floated level and smooth. Many



Cattle grazing wheat on abandoned cropland terraced and reclaimed by the Varners.

Note:—The author is agronomist, Soil Conservation Service, Topeka, Kans.



Good crop residue in winter wheat stand on terraced and contoured land on the Varners' farm.

hours were spent clearing the fields of stones.

Just as soon as the dirt work was finished, lime was spread and milo was planted on the contour. Fertilizer was applied on the basis of a soil test. Yields of milo in 1959 ran as high as 80 bushels an acre, with some spots in the fields making 104 bushels. The county average was a little more than 40

bushels an acre. Wheat followed the milo, to be overseeded with red clover for green manure in 1961.

Two consecutive years of milo were used to help rid the soil of weeds. The Varners planned to use wheat later for a second year, and to follow it with alfalfa for 3 or 4 years. They use a 24-inch serrated blade to handle the milo and wheat residues, and to reduce tillage operations. Wheat residue that had been disked once was found to weigh more than 3,000 pounds an acre on the surface, with an estimated additional 1,000 pounds mixed with the top inch of soil. The big disk leaves the surface rough with the stubble well anchored, thus helping to cut down on erosion and build soil fertility.

The Varners also have used the disk to seed 71 acres of cropland to smooth brome grass pasture and to clear and reseed another 164 acres of steep and wornout, unproductive, rocky, brush pasture to improved tame pasture. Total cost

of clearing the land and seeding it to alfalfa and smooth brome pasture was estimated to be about \$6 an acre, but it has paid off.

The pastures are divided into 40-acre units, with each pasture grazed only 2 or 3 weeks before the cattle are moved to another. Generally, at least, 4 inches of growth remain after the stock is removed. Grazing begins about April 26, or when there is 6 inches of new growth, and continues until mid-July. During the summer, the cattle are moved to deferred native or other brome grass pastures, and come back onto the brome about September 1, grazing it until late November. Wheat pasture carries them through the winter.

Last year, 160 acres of renovated pasture carried 40 cows, 40 spring calves, and 2 bulls. The Varners' beef production is estimated at 350 pounds to the acre. In addition to grazing, one 80 acres produced 14,000 pounds of good smooth brome grass seed.

SCD Programs Mean Better Hunting-Fishing AND Farmer-Sportsmen Relationships

By George L. Jessup and Charles L. Limeberry

SOIL and water conservation districts are proving to be effective in bringing farmers and sportsmen into harmonious relationships in hunting and fishing on the Nation's privately owned farm and ranch lands that make up 80 percent of its hunting grounds.

Now covering more than 92 percent of the country's farmland and 96 percent of its farms, these farmer-owned and managed districts' 1,850,000 cooperating farmers and ranchers are in position to

influence a major part of upland game and other hunting, as well as much farm-pond and private stream fishing upon which sportsmen depend.

Their experiences reported around the country reflect the contribution they are making to better hunting and fishing for the public.

In Sacramento County, Calif., for example, wildlife has found understanding friends in the farmers and ranchers of the Florin Soil Conservation District. Here, as in many other parts of the country, wildlife long has needed a helping hand. Much of its natu-



California 4-H Club members making wildlife habitat planting.

Note:—The authors are, respectively, soil conservationist, Florin, Calif., and work unit conservationist, Clarkston, Wash., both of the Soil Conservation Service.



Wildlife plantings on both sides of enclosed California sump.

ral habitat had disappeared with accelerated development of farmlands or was being swallowed up by fast-growing urban developments.

A "big brother" wildlife movement got started in the district when Directors John Mensch and John Sikich organized an 11-man committee and an advisory board of 8 members, to see what could be done about making a better home for wildlife as a part of conservation farming.

Conservation meetings were held monthly, and a wildlife and habitat restoration program began shaping up. Soon the Sloughhouse and Lower Cosumnes Soil Conservation Districts teamed up with the Florin district, and a wider area of treatment was taken in. Letters to cooperators and press stories helped enlist 29 farmers in the program.

The California Department of Fish and Game and Soil Conservation Service technicians checked wildlife food and coverplanting sites offered by farmers. Then they made planting plans and provided tests of food and cover plants from which to order.

State and county appropriations solved the financial problem. The California Soil Conservation Com-

mission allocated \$1,500 from its funds, and the program qualified for a matching sum of \$1,500 from the Sacramento County Fish and Game Fund.

Replanting of habitat is designed to fit into a farm plan by using odd corners of land not farmed, fence rows, ditchbanks, and edges of ponds or sumps. New habitat also is planned.

To keep wildlife developments going in the three districts, the committee sponsored a junior wildlife program, with SCS technicians helping 4-H Club and Future Farmers of America leaders work out conservation plans based on wildlife needs in their communities.

Experience in these California districts has shown that the unattached hunter still needs to be brought into wildlife planning, and that many hunters, if asked, would help landowners to plant, improve, and maintain wildlife areas. Several district cooperators have successfully enlisted such assistance by hunters who hunt on their farms or ranches.

And up in the Asotin County Soil Conservation District in southeastern Washington State, improvement of basic wildlife requirements for food, cover, and water is resulting in more stable game populations and insuring sportsmen good hunting for the years to come.

Farmers applying farm conservation plans to their lands are using such practices as stripcropping



Farm pond and planted pasture give game birds water, cover, and food on Dick Petty farm in Asotin County (Wash.) SCD.



Washington State Boy Scouts installing plastic cistern for wildlife water.

ping, grassed diversions, terraces, and waterways for erosion control. Grasses and legumes are seeded as permanent pastures or as a part of a conservation crop rotation. Springs are developed and ponds built to provide water for livestock. These measures, interspersed with crops of small grains, provide basic needs for maximum wildlife populations, including many miles of habitat "edges" for game birds and other wildlife, where one practice ends and another begins. Along with the edges are stock-water developments which multiply the wildlife benefits.

The Robert "Dick" Petty farm is a good example of how pasture development, crop rotations, farm ponds, tree windbreaks, and other conservation measures have improved ringneck pheasant and other wildlife habitat, including that of hungarian partridge and quail, mule deer, and occasional elk. He can remember when his farm was the home of the prairie chicken. Today they are gone; but continued existence of their successors, the pheasants and other upland game birds, is assured on the Petty farm.

Two other programs are contributing to wildlife-habitat improvement in the Asotin County district: The Conservation Reserve Program has resulted in the seeding of more than 9,000 acres of grasses and legumes which provide food for

deer and elk, pheasants, quail, and partridge.

Meanwhile, the Washington State Department of Game and the district are promoting the installation of wildlife-watering facilities in the drier parts of the district, with Boy Scout units helping with the installation of 500-gallon plastic cisterns supplied by the Game Department.

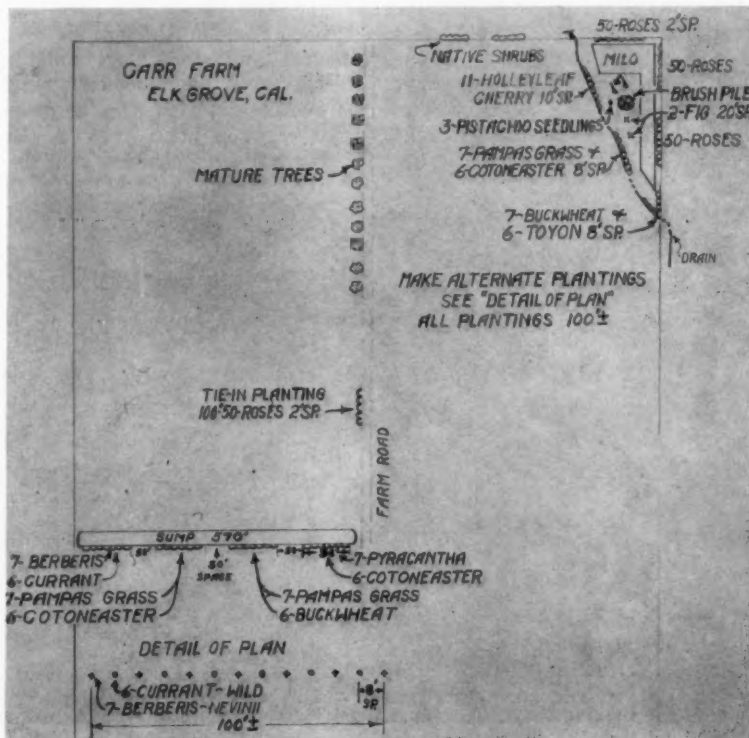
Eight of these cisterns were installed in the Dry Gulch area by four farmers—Francis Fitzgerald, Archie Glaassen, Bud Ingram, and Paul Nolt—who control more than 4,000 acres. They entered into a cooperative agreement with the Asotin County district and the Washington State Department of Game to allow hunting on their lands and to apply certain conservation practices, in return for technical assistance from the district and the department.

The Dry Gulch project is another example of farmers' helping to insure game populations for the benefit of all sportsmen, rural and urban, even though only one of the four farmers hunts upland game birds himself!

An effort is being made to expand the Dry Gulch project to adjoining cooperators, who frankly said they wanted to watch the results of the Dry Gulch sportsman-farmer relationships before committing their lands to such a project. One farmer expressed the attitude of many of his neighbors when he said:

"When I'm convinced that hunters can read those signs the game department gives us, I'll join the project."

He was looking at a sign calling for hunters to respect the farmer's property. It had been shot full of holes!



Wildlife planting plan.

Where Men Are Men

SCD Program the Hard Way

By C. Saulisberry

NORTHWESTERN Nevada's 2½ million-acre Vya Soil Conservation District adjoining California on the west and Oregon on the north is one of the most isolated of the Nation's 2,900 farmer- and rancher-owned and operated districts despite the fact that its nationally known county seat of Reno is the State's second largest population center.

Reno, however, is some 150 miles from the district boundary, over dirt roads within the district that may make the distance seem three times that far. Until last year, this district was probably one of the few in the entire country without a paved road, post office, gas station, or school. Then Humboldt County, in which lies that part

of the Vya district that is not in Washoe County, paved a 30-mile section of road.

Some 500 miles of unimproved dirt roads remain in the district. During years of average precipitation, they are all but impassable, because of snow or mud, 3 or 4 months a year. Consequently, little activity is carried on in the district during the winter months.

In addition to several resident ranch families, the main winter population consists of personnel of the U.S. Fish and Wildlife Service's Sheldon Antelope Refuge, which covers more than half a million acres, and a county road maintenance station that keeps a small crew on hand at Vya, the district's single community. Tele-



Rancher Grady Henderson displays bob-cat bagged in the Vya SCD as proof that his shooting eye is good.

phone facilities are available at only three or four locations, and electricity is almost nonexistent. This handful of year-round residents must travel to Cedarville, Calif., or to Denio, Winnemucca, or Gerlach, Nev., for their mail and supplies.

Significant historical events are tied into the early West at several locations in the Vya district. Parts of one of the main emigrant trails to California and Oregon that wound its way through the northern part of the area still can be traced through much of its route. In 1911, four stockmen from the Cedarville, Calif., area investigating cattle rustling reports on their ranges near Little High Rock Canyon were ambushed and killed in what locally is considered the last "Indian massacre" in the West.

The economy of the Vya district is based primarily on livestock



View from Mosquite Valley south into Long Valley shows vastness of Vya SCD. Part of its program is to get former grainlands (center) into grass.

Note:—The author is soil conservationist, Soil Conservation Service, Cedarville, Calif.



New stock-water pond on the Cramton range.

grazing by some 35,000 head of sheep and cattle during the spring-through-fall seasons, mostly on public domain lands in eastern Modoc County's Surprise Valley area of California. Dryland grain farming was carried on extensively in the Long Valley area of the district during the 1920's and early 1930's, but because the land was marginal for cultivation, only limited amounts of grain are grown today. Most of the former dryland grain lands have been planted to range grasses.

Few large sources of water are available for irrigation in the district. As a result, most of the ranch units get only early irrigation and must depend on drought-resistant grasses and legumes for



This tall wheatgrass broadcast seeded in 1953 by Rancher M. R. Toney is grazed in spring and fall.

hay and pasture. Water is being developed by building storage dams wherever they are practicable, but 8 to 10 inches of annual precipitation does not produce heavy runoff.

It was in 1954 that area ranchers decided they could use some help in solving their conservation problems and formed the Vya district under the laws of the State of Nevada. All but one of the members of the district governing board live in the adjacent Surprise Valley area of California, and are active operators and landowners in both States; and of the 65 operating ranch units in the district, about 50 are headquartered in Surprise Valley.

The Soil Conservation Service office in Cedarville, Calif., gives technical help to the Vya district and also to the Surprise Valley district in California. Because of the remoteness of the Vya district and the hazardous travel conditions, SCS vehicles have 2-way radio units for communication, tied into that used on the Sheldon Refuge by the Fish and Wildlife Service.

High on the list of district problems is that of water development for livestock and irrigation. Bide Steward, longtime rancher, says that "Stock-water development is probably the greatest single need in the country. With this problem solved, the other conservation practices will logically follow." Other objectives include erosion control, improving use of irrigation water, improved grasses for range seedings, and range livestock management.

Since 1954, four irrigation dams, storing approximately 6,000 acre-feet of water, have been built, and six other projects are in various stages of consideration. Some 170 stock-water developments have been installed on public and private lands to improve range utilization; about 5,000 acres of public and private rangelands have been seeded to grass; and complete range-management plans have been prepared on 60,000 acres of

private lands.

A rangeland program is under consideration by the Vya board, coordinating the facilities of all Federal, State, and local agencies in preparing a complete conservation program for the district's public and private lands.

Lewis Cockrell, Vya district board chairman, and ranch operator in both States, expresses the opinion of himself and fellow ranchers this way: "Every acre of my lands that are capable of producing more feed will be improved eventually. My newly completed irrigation reservoir will allow me to double my hay production, and probably increase the selling weights of my yearlings



Chemical control of sagebrush like this is part of complete conservation range plan of 83-year-old Cattleman G. M. Warrens, one of Vya SCD's first co-operators.

and calves by 25 percent."

Jack Powers, another two-State operator, adds that "these range-lands must be managed for their full potential if we are to remain in the livestock business," which comprises the 100 percent economy of the area.

U.S. exports of animals and animal products totaled \$600 million in 1960-61.

Machinery Dealer Finds SCD Brings More Business—Better Community Life

By Harry W. Archer

WHEN some of our farmers got together 15 years ago to form a soil conservation district there were those of us who enjoyed a wink at the idea.

Well, we are not winking now!

We who were skeptics are firm in our support of the Lower Trinity Soil Conservation District.

Our board of district supervisors is made up of five of the best, most competent farmers I know. The board sets the policy for our district. The men of the Soil Conservation Service help carry it out. That adds up to a kind of teamwork that gets conservation done.

I am a dealer in farm machinery. When the farmers at first could not see their way clear to buy the new machinery they needed in conservation work, the board took action. The district bought the machines and rented them to the farmers.

In time, some of the farmers decided it would be feasible to buy machines of their own. Some have traded these earlier models recently on later equipment, which do a faster and more thorough job.

So, it is easy to understand my interest. But this interest goes far beyond the business of trading in machinery. I am interested in the conservation of our soil and water resources because I can see clearly their relation to the way my community can live. I see their importance for communities far in the future. My customers enjoy a more reliable income year after year. And they are better customers. It is good to see them prosper, even

when you might expect them to be having a bad year or two.

We have alert farmers in our district. They were quick to see the advantage of improved pastures. They saw the need for a better seed supply. Our district is now the biggest producer of quality Louisiana S-1 clover and Gulf ryegrass seed.

We have the most modern seed cleaning and processing plants. One firm ships quality seed to all parts of the world, and another ships certified ryegrass seed everywhere.

This all means that I sell more tractors, mowers, combines, fertilizer distributors, and countless other equipment to our farmers. Our

tractor "population" is at an all-time high. Our service department and parts windows do a good business. We can keep a better stock of parts on hand. Our skilled mechanics stay busy.

I like to quote from a booklet recently published by a machinery manufacturer I represent:

"It is a well-known and established fact that conservation farmers and ranchers generally have a higher income per acre and purchase more farm machinery than those not utilizing good soil and water conservation practices."

You can't argue against this fact. As more and more farmers find



Machinery Company Co-owner Harry Archer with one of his best sellers—a shredder.

Note:—The author is an implement company dealer, Liberty, Tex.

out the value of soil conservation practices from their soil conservation districts, we sell more machinery. It takes machinery to put these practices into operation and keep them going.

With sales and maintenance going up, we keep ahead of our operating expenses as a dealership. This is our salvation with times as they are.

Our used machinery we rent to the smaller cooperators who can't afford to own it yet. We do this on either a cash or share basis. It is a good source of income for us.

Sure, I am sold on the work of our soil conservation district. Why shouldn't I be? I see three blades of quality grass where one grew before. I see two ears of corn where there used to be one. I used to see cattle grazing poor quality grass up to their bellies, although you could count every rib. Now there are twice as many cattle, sleek and fat, grazing good grass on the same land.

This sort of thing didn't just happen. It is the fitting together of a lot of farmer experience and scientific know-how into the skills of trained men and channeled to the land through this farmer-managed subdivision of our State government.

Up and down our streets, I see the reflection of this thing that has happened to our land. Our merchants, our banks, our schools and churches—all these reflect this new vigor that came to our land.

You can understand why I am a booster of our soil conservation district. I am first, I think, a citizen who believes in doing the best job he can at conserving our soil and water resources. Next, I am a businessman, convinced that soil conservation is important for every man, woman, and child, no matter where he or she may live.

And, as a businessman, I hold that the work of my soil conservation district is everybody's business. We can't afford to look at it any other way.



THE PLANT COMMUNITY. By Herbert C. Hanson and Ethan D. Churchill. xii-218 pp. Illus. 1961. Reinhold Publishing Corporation: New York.

Many workers and students concerned with soil and water conservation will be drawn to this book simply because it deals with "plant communities." The title, striking format, and sharp illustrations will further excite their interest. To what degree the book will satisfy such interest will depend, partly, upon the reader's background and ability to cope with ecological terminology.

To quote the authors: "This book is intended as a text for semester or quarter courses in plant ecology; as a supplement to textbooks in general ecology which usually do not deal adequately with the formation and nature of the plant community; or as an adjunctive text for courses in animal ecology, forestry, range management, wildlife management, conservation, and agriculture. It is also intended to serve the general reader who desires to be better informed about the nature of vegetation and its potentialities."

To the student with sufficient background in botany, soils, chemistry, genetics, and other basic sciences, the book will serve as a useful, comprehensive outline for the study of plant communities as basic ecological units. To the general reader, the book may be somewhat complex unless he makes use of its excellent bibliography as a means of expanding the discussions of some of the principles mentioned.

The book is divided into four parts and six chapters. Part one covers Species and Populations and covers chapters on Ecological Char-

acteristics of Species and Populations, and Grouping of Species. Part two deals with The Community, with chapters on Analytic Characteristics of the Community and Synthetic Characteristics of the Community. Part three, Dynamics of Communities, includes only one chapter, on Habitat Patterns, Changes, and Climax; and Part four—Classification of Communities—also consists of one chapter, Bases and Units. General references are listed after five of the six chapters.

The text is well supplemented by illustrations and tables, with a bibliography of cited references and index completing the book.

Although simpler terminology would attract more readers, "The Plant Community" is a valuable contribution to an understanding of this subject.

—ROBERT E. WILLIAMS

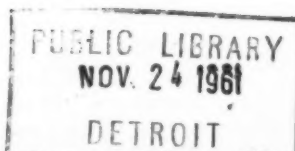
Canada is testing a new tree-planting technique that uses a planting gun and "bullets" to shoot seedling into the ground. Tree seeds are sown and germinated individually in the bullets fired from the automatic gun. On level ground, rate of 1,500 seedlings an hour was attained at a spacing of 8 feet. Although in the preliminary stage, the system soon will be refined to allow for large-scale use.

University of Illinois Extension Forester Ted Curtin reports that many Christmas tree growers are spraying their trees so they won't discolor. The color won't wash off, and pines will retain their needles. Spraying standing trees before color changes or freezing weather and poor drying conditions set in requires much less material than later spraying.

Good seed is essential to a good harvest.

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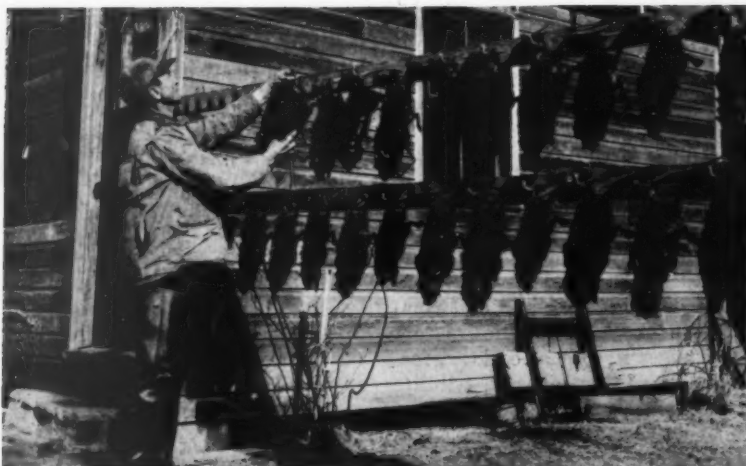
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TRAPPING SEASON AGAIN



Farm boys following the traditional wintertime pattern of earning spending money and their elders who make a business of trapping are getting better hauls these days from wet lands, farm ponds, and other water furbearers' habitat preserved or developed in soil conservation districts and small-watershed projects. Muskrats have become a particularly dependable fur crop in different parts of the country, as witnessed by this New Jersey catch: *Above*:—Frank Shimp in the Silver Lake-Locust Island watershed project and Salem-Cumberland SCD in Salem County hangs up his catch for the morning. *Right*:—His daughter-in-law, Ethel, hangs the green pelts to dry for 2 weeks.



Have You Seen? ---

● *Conservation on Farm Woodlands*, published by U. S. Department of Agriculture as PA 463, by T. B. Plair, Soil Conservation Service. It discusses growing wood crops as a farm job and explains the place of woodlands in a conservation farm plan.

● *Water Conservation in Irrigation Agriculture*, published as SCS-TP-141 by the Soil Conservation Service. It calls attention to the growing demand for water and describes how conservation irrigation and water-supply forecasts aid irrigation efficiency and community and watershed planning.

● *Land-Capability Classification*, released by the U. S. Department of Agriculture as Agricultural Handbook 210, by A. A. Klingebiel and P. H. Montgomery, Soil Conservation Service. It explains the assumptions behind the classification and gives criteria for placing soils in capability units, subclasses, and classes.